

AMENDMENTS TO THE CLAIMS

Claim 1 (Previously Presented): A component of glass-like carbon for CVD apparatus which is characterized by

having a value of surface roughness (R_a), over the entire surface of the component, ranging from 0.1 to 10 μm (measured according to JIS B0601) and

containing in its surface iron, copper, chromium, sodium, potassium, calcium, magnesium, and aluminum each in an amount less than 5×10^{10} atoms/cm².

Claim 2 (Original): The component of glass-like carbon for CVD apparatus as defined in Claim 1, which has a surface finished such that there exist at least five pits, 1-10 μm in diameter, in the visual field, $50 \times 50 \mu\text{m}$, observed under a scanning electron microscope with a magnification of $\times 1000$.

Claim 3 (Original): The component of glass-like carbon for CVD apparatus as defined in Claim 1, which has a surface finished such that there exist elongated tiny depressions, 0.5-5 μm wide, whose total length is at least 50 μm , in the visual field, $50 \times 50 \mu\text{m}$, observed under a scanning electron microscope with a magnification of $\times 1000$.

Claim 4 (Original): The component of glass-like carbon for CVD apparatus as defined in Claim 1, which is any of inner tube, wafer boat, susceptor, and nozzle used for CVD apparatus.

Claim 5 (Withdrawn): A process for producing the component of glass-like carbon for CVD apparatus as defined in Claim 1, comprising steps of:

molding an object from a raw material resin,
carbonizing the resulting molded object to give a molded object of glass-like carbon,
roughening the surface of the molded object, and
purifying the molded object of glass-like carbon.

Claim 6 (Withdrawn): The production process as defined in Claim 5, wherein roughening the surface of the molded object is performed after any step between the molding step and the carbonizing step.

Claim 7 (Withdrawn): The production process as defined in Claim 5, wherein purifying the molded object of glass-like carbon is performed at any step after the surface roughening treatment.

Claim 8 (Withdrawn): The production process as defined in Claim 5, wherein the surface roughening treatment is mechanical one.

Claim 9 (Withdrawn): The process as defined in Claim 5, wherein the surface roughening treatment is a combination of mechanical one and chemical etching one, which are performed sequentially (in the order mentioned) or simultaneously.

Claim 10 (Withdrawn): The production process as defined in Claim 8, wherein the mechanical surface roughening treatment is sandblasting or grinding.

Claim 11 (Withdrawn): The production process as defined in Claim 9, wherein the chemical etching treatment is thermal oxidation or electrolytic oxidation.

Claim 12 (Withdrawn): The production process as defined in Claim 8, wherein the component of glass-like carbon for CVD apparatus is an inner tube and the mechanical surface roughening treatment is performed on both the inner and outer surfaces of the inner tube all at once.

Claim 13 (Withdrawn): The production process as defined in Claim 5, wherein the purifying step is heat treatment at a high temperature in a halogen-containing gaseous atmosphere.

Claim 14 (Withdrawn): A process for producing the component of glass-like carbon for CVD apparatus as defined in Claim 1, with the component of glass-like carbon being an inner tube, said process comprising steps of molding a raw material resin into a tube, heating the resulting resin tube at 800-1300°C, thereby converting it into a glass-like carbon tube, and heating the glass-like carbon tube at a temperature higher than 1500°C, together with a roundness correcting jig attached to the outside of the glass-like carbon tube.

Claim 15 (Previously Presented): The component of glass-like carbon for CVD apparatus as defined in Claim 1, wherein

the component is a tube having an inner surface and an outer surface;

a value of surface roughness (R_a) of the inner surface ranges from 0.1 to 10 μm (measured according to JIS B0601); and

a value of surface roughness (R_a) of the outer surface ranges from 0.1 to 10 μm (measured according to JIS B0601).

Claim 16 (Previously Presented): Chemical vapor deposition apparatus comprising an outermost wall having an interior surface; and a component inside the chemical vapor deposition apparatus and separated from the interior surface, wherein

the component comprises glass-like carbon; and

the component is characterized by

having a value of surface roughness (R_a), over the entire surface of the component, ranging from 0.1 to 10 μm (measured according to JIS B0601) and

containing in its surface iron, copper, chromium, sodium, potassium, calcium, magnesium, and aluminum each in an amount less than 5×10^{10} atoms/ cm^2 .

Claim 17 (Previously Presented): The chemical vapor deposition apparatus according to Claim 16, wherein

the component is a tube having an inner surface and an outer surface;

a value of surface roughness (R_a) of the inner surface ranges from 0.1 to 10 μm (measured according to JIS B0601); and

a value of surface roughness (R_a) of the outer surface ranges from 0.1 to 10 μm (measured according to JIS B0601).

Claim 18 (Previously Presented): The chemical vapor deposition apparatus according to Claim 16, wherein the component is selected from the group consisting of a tube, a wafer boat, a susceptor and a nozzle.